Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An electron tube comprising:

an envelope formed with a photocathode at a predetermined part of the internal surface thereof;

a fixing plate which is disposed in the envelope and which has a central position and ~~a outer~~ an outer periphery surrounding the central position;

an electron-bombarded semiconductor device which is fixed to the central position of the fixing plate and which faces the photocathode;

a first tubular wall which is fixed to a position between the central position and the outer periphery of the fixing plate, the first tubular wall surrounding the semiconductor device and extending toward the ~~photocathode; and~~ photocathode;

an evaporation source generating metal vapor, the evaporation source being disposed inside the envelope on the photocathode side relative to the fixing plate and being disposed at a position between the first tubular wall and an imaginary-extended-curved-surface of the outer periphery of the fixing plate that extends toward the photocathode, the semiconductor device detecting photoelectrons emitted from the photocathode in response to an incident light ~~thereon.~~ thereon; and

a cover which is disposed at a position between the electron-bombarded semiconductor device and the photocathode, the cover being surrounded by the first tubular wall.

2. (Previously Presented) The electron tube as claimed in Claim 1, further comprising an insulating tube having one end and another end, the another end being connected to the envelope and the one end protruding inside the envelope,

wherein the fixing plate and the evaporation source are disposed on the one end of the insulating tube.

3. (Previously Presented) The electron tube as claimed in Claim 1,

wherein the envelope includes

a cylindrical base; and

a main body having a first main body that is curved substantially in a spherical shape and a second main body that is curved substantially in a spherical shape and that connects the first main body to the base; and

wherein the semiconductor device is disposed on the main body side relative to an intersection between an axis of the base and an imaginary extended surface of the second main body that is located inside the base.

4. (Currently Amended) The electron tube as claimed in Claim 2,

wherein the another end of the insulating tube is connected to the envelope and the one end of the insulating tube protrudes inside the main body of the envelope, and

wherein the fixing plate and the evaporation source are disposed on the one end of the insulating tube.

5. (Currently Amended) The electron tube as claimed in Claim 2, further comprising a conductive member provided on the one end of the insulating tube and

protruding outside the insulating tube to reduce ~~the field~~ a field intensity in the vicinity of the one end of the insulating tube,

wherein the fixing plate includes an inner stem that is connected to the one end of the insulating tube via a conductive member.

6. (Currently Amended) The electron tube as claimed in Claim 2, further comprising a conductive member provided on the another end of the insulating tube and protruding outside the insulating tube to reduce ~~the field~~ a field intensity in the vicinity of the another end of the insulating tube,

wherein the envelope includes an outer stem connected to the another end of the insulating tube, at least a part of the outer stem that is connected to the another end of the insulating tube being conductive.

7. (Currently Amended) An electron tube comprising:

an envelope formed with a photocathode in a predetermined part of an internal surface thereof;

an electron-bombarded semiconductor device provided inside the envelope;

a first tubular wall which surrounds the semiconductor device;

an evaporation source that generates metal vapor, the evaporation source being disposed within the envelope and outside the first tubular ~~wall; and~~ wall;

a second tubular wall which surrounds the evaporation ~~source,~~ source; and

a cover which is disposed at a position between the electron-bombarded semiconductor device and the photocathode, the cover being surrounded by the first tubular wall,

the semiconductor device detecting photoelectrons emitted from the photocathode in response to an incident light thereon.

8. (Currently Amended) The electron tube as claimed in Claim 7, further comprising an insulating tube having one end and another end, the another end being connected to the envelope and the one end protruding inside the envelope,

wherein the semiconductor device, the first tubular wall, the evaporation source, and the second tubular wall are disposed on the one end of the insulating tube.

9. (Previously Presented) The electron tube as claimed in Claim 7,

wherein the envelope includes

a cylindrical base; and

a main body having a first main body that is curved substantially in a spherical shape and a second main body that is curved substantially in a spherical shape and that connects the first main body to the base; and

wherein the semiconductor device is disposed on the main body side relative to an intersection between an axis of the base and an imaginary-extended-curved-surface of the second main body that is located inside the base.

10. (Currently Amended) The electron tube as claimed in Claim 8,

wherein the another end of the insulating tube is connected to the envelope and the one end of the insulating tube protrudes inside the main body of the envelope, and

wherein the semiconductor device is disposed on the one end of the tube.

11. (Currently Amended) The electron tube as claimed in Claim 8, further comprising:

an inner stem connected to the one end of the insulating tube via a conductive member; and

a conductive member provided on the one end of the insulating tube and protruding outside the insulating tube to reduce ~~the field~~ a field intensity in the vicinity of the one end of the tube,

wherein the semiconductor device is disposed on the inner stem.

12. (Currently Amended) The electron tube as claimed in Claim 8, further comprising a conductive member provided on the another end of the insulating tube and protruding outside the insulating tube to reduce ~~the field~~ a field intensity in the vicinity of the another end of the insulating tube,

wherein the envelope includes an outer stem connected to the another end of the insulating tube, at least a part of the outer stem that is connected to the another end of the insulating tube being conductive.

13. (Currently Amended) The electron tube as claimed in Claim 1,

wherein the envelope is ~~applied with~~ connected to a ground potential, and

wherein the semiconductor device is ~~applied with~~ connected to a positive potential.

14. (New) The electron tube as claimed in claim 1, wherein the first tubular wall extends from one end to another end with respect to a first direction from the fixing plate to the photocathode,

wherein the cover is disposed on an upstream side of the another end of the first wall with respect to the first direction.

15. (New) The electron tube as claimed in claim 14, further comprising a second tubular wall which extends, along the imaginary-extended-curved-surface, from one end to another end with respect to the first direction,

wherein the evaporation source is disposed at the same position with the another end of the second tubular wall with respect to the first direction.

16. (New) An electron tube comprising:

an envelope formed with a photocathode at a predetermined part of the internal surface thereof;

a fixing plate which is disposed in the envelope and which has a central position and an outer periphery surrounding the central position, the fixing plate holding an electrode that is insulated from the fixing plate by an insulating material;

an electron-bombarded semiconductor device which is fixed to the central position of the fixing plate and which faces the photocathode;

a first tubular wall which is fixed to a position between the central position and the outer periphery of the fixing plate, the first tubular wall surrounding the semiconductor device and extending toward the photocathode;

an evaporation source generating metal vapor, the evaporation source being disposed inside the envelope on the photocathode side relative to the fixing plate and being disposed at a position between the first tubular wall and an imaginary-extended-curved-surface of the outer periphery of the fixing plate that extends toward the photocathode, the semiconductor

device detecting photoelectrons emitted from the photocathode in response to an incident light thereon, the evaporation source being connected to the electrode; and

a covering member that is located between the fixing plate and the photocathode and that covers at least a part of the fixing plate where the fixing plate holds the electrode, the covering member exposing the evaporation source to the photocathode.

17. (New) The electron tube as claimed in claim 7, wherein the first tubular wall extends from one end to another end with respect to a first direction that is defined from the electron-bombarded semiconductor device to the photocathode,

wherein the cover is disposed on an upstream side of the another end of the first wall with respect to the first direction.

18. (New) The electron tube as claimed in claim 17, wherein the second tubular wall extends from one end to another end with respect to the first direction,

wherein the evaporation source is disposed at the same position with the another end of the second tubular wall with respect to the first direction.

19. (New) An electron tube comprising:

an envelope formed with a photocathode in a predetermined part of an internal surface thereof;

an electron-bombarded semiconductor device provided inside the envelope;

a base which is disposed in the envelope and which has an outer periphery, the base holding an electrode that is insulated from the base by an insulating material

a first tubular wall which surrounds the semiconductor device;

an evaporation source that generates metal vapor, the evaporation source being disposed within the envelope and outside the first tubular wall, the evaporation source being connected to the electrode;

a second tubular wall which surrounds the evaporation source; and

a covering member that is located between the base and the photocathode and that covers at least a part of the base where the base holds the electrode, the covering member exposing the evaporation source to the photocathode,

the semiconductor device detecting photoelectrons emitted from the photocathode in response to an incident light thereon.